

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1-38. (cancelled)

39. (original) A method of controlling a turbine powered generating system having an energy storage device and a turbine coupled to an electric generator, the method comprising:

maintaining the temperature of said turbine at a substantially constant temperature;

using said electric generator to satisfy the power demand on the system until the system is required to satisfy an additional power demand;

in response to said additional power demand, temporarily using said energy storage device to satisfy a portion of said power demand and said additional power demand;

increasing the speed of said turbine from the speed required to satisfy said power demand to a higher speed required to satisfy said power demand and said additional power demand; and

once said higher speed is achieved, using said electric generator to satisfy both said power demand and said additional power demand.

40. (original) The method of claim 39, wherein said substantially constant temperature is at or near the maximum design temperature of said turbine.

41. (original) The method of claim 39, wherein said external storage device is used to temporarily satisfy all of said additional power demand and said power demand.

42. (original) A method as set forth in claim 39, further comprising:
in response to said additional power demand, temporarily allowing said turbine temperature to increase by a predetermined amount above said constant temperature.

43. (original) A method of controlling a turbine powered generating system having an energy storage and discharge device and a turbine coupled to an electric generator, the method comprising:
maintaining said turbine at a substantially constant temperature;
using said electrical generator to satisfy the power demand on said system until said system is required to satisfy a lower power demand;
in response to said lower power demand, temporarily providing additional power above said lower power demand on said generator and temporarily using said storage and discharge device to absorb at least a portion of said additional power;
decreasing the speed of said turbine from the speed required to satisfy said power demand to a lower speed required to satisfy said lower power demand; and
once said lower speed is achieved, using said electrical generator to satisfy said lower power demand.

44. (original) A method as set forth in claim 43, wherein said constant temperature is at or near the maximum design temperature of said turbine.

45. (original) A method as set forth in claim 43, further comprising:
in response to said lower power demand, temporarily allowing said turbine temperature to increase by a predetermined amount above said constant temperature.

46. (original) A turbine powered generating system comprising:
(a) a turbine having a fixed inlet nozzle;
(b) a generator coupled to said turbine, said generator capable of supplying the power demand on said system;
(c) an energy storage device; and
(d) a controller, coupled to both said storage device and said turbine, for maintaining said turbine at or near a predetermined temperature, said controller, in response to an additional power demand on said system, causing said energy storage device to satisfy a portion of said power demand and said additional power demand, to allow the speed of said turbine to increase to a higher speed at which said generator can satisfy said additional power demand and said power demand.

47. (original) The generating system of claim 46, wherein said controller causes said additional power demand and said power demand to be shifted to said generator when said turbine reaches said higher speed.

48. (original) The generating system of claim 46, wherein said controller, in response to said additional power demand, causes said energy storage device to temporarily supply all of said power demand.

49. (original) The generating system of claim 46, wherein said storage device is selected from the group including a battery, a flywheel, a capacitor and a power grid.

50. (original) The generating system of claim 49, wherein said storage device is a battery and said battery is sized to supply the maximum power demand on said system.

51. (original) The generating system of claim 46, wherein said turbine is a microturbine.

52. (original) The generating system of claim 51, wherein said microturbine is a recuperated microturbine.

53. (original) The generating system of claim 46, wherein said controller includes means, in response to a lower power demand on said system, for causing said power demand on said generator to be temporarily increased and temporarily absorbed by said energy storage device.

54. (original) The generating system of claim 53, wherein said controller shifts said lower power demanded to said generator when said turbine has decelerated to the speed required to satisfy said lower power demanded.

55. (original) The generating system of claim 46, wherein said controller comprises:

a controller for, in response to said additional power demand, temporarily allowing said turbine temperature to increase by a predetermined amount above said constant temperature.

56. (original) A turbine powered generating system comprising:

a turbine having a fixed inlet nozzle and a predetermined maximum temperature;

a generator coupled to said turbine, said generator capable of supplying the power demand on said system;

an energy storage and discharge device, said storage and discharge device also capable of temporarily absorbing at least a portion of said power demand on said system; and

a controller, coupled to both said storage and discharge device and said turbine, for maintaining said turbine at or near said maximum temperature, said controller including means, in response to a decreased power demand on said system, for temporarily providing additional power above said power demand on said generator and for causing at least a portion of said additional power and said power demand to be shifted to said energy storage and discharge device to allow the speed of said turbine to

decrease to a lower speed, where said generator can supply said decreased power demand.

57-62. (cancelled)